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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,275	07/18/2006	Klaus Kruckenhauser	1739-0183PUS1	5881
2292 7590 05/11/2011 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
MILLER, SAMANTHA A				
ART UNIT		PAPER NUMBER		
3749				
NOTIFICATION DATE		DELIVERY MODE		
05/11/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/580,275

**Applicant(s)**

KRUCKENHAUSER ET AL.

**Examiner**

SAMANTHA A. MILLER

**Art Unit**

3749

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 23-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

Receipt of applicant's amendment filed on 11/5/2010 is acknowledged.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 11, 13, 23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by SUCHAN (5,198,636).

1. A hood (28), having an operating position covering a region of interaction between the radiation (at 33) and the workpiece surface (at 17), the hood comprising: a rear side (at 49), to which a vacuum extraction line (35) can be connected, a vacuum channel (29), the vacuum channel comprising: an air inlet opening (at 34 and 28, Fig.7); two side walls (side walls of 28 show in Fig.7) walls, each side wall extending from the rear side (28 at 49) and having an end edge lying opposite the workpiece in the operating position of the hood; and two directing walls (connecting the sidewalls of 28 to the workpiece at 34; a first one being the inner flat wall of the hood (28) and a second one (40) being from the top sidewall to the first directing wall, Fig.7), extending transversely between the side walls (Fig.7), an edge (a bottom edge of 28, Fig.7) of a first directing wall lying opposite the workpiece (4) in the operating position of the hood,

a second directing wall (40) being curved (col.5 ll.58-60, Fig.7); and at least one opening (at 34) in the second directing wall, through which the radiation for processing the workpiece surface is guided.

3. The curvature of the curved directing wall (40) is curved in the form of an arc of a circle (Fig.10).

4. The curving of the curvature of the curved directing wall (40) is greater than the curving of the surface of the workpiece (since 40 is not as curved as 4, Fig.7).

5. The curvature of the curved directing wall (40) is exponentially curved (from the sidewall to 34, Fig.7).

6. The opening or openings (at 34) through which the radiation (33) for processing the workpiece (4) is guided is provided in the region of the curved directing wall (40) closest to the workpiece (4) that lies closest to the surface of the workpiece (4) in the operating position of the hood (28).

11. The hood (28) is exchangeably fastened to a working laser head (33) (col.5 ll.60-63).

13. The region of the curved directing wall (40) that lies closest to the surface of the workpiece (17) in the operating position of the hood, each working jet or beam delivered by a processing head (25), in particular each working laser beam delivered by a working laser head (33), is provided with an opening (at 34) of its own, through which the radiation for processing the workpiece (4) is focused on the latter (Fig.7).

23. The curvature of the curved directing wall is curved in the form of an arc of a circle (Fig.10).

25. The curving of the curvature of the curved directing wall is greater than the curving of the surface of the workpiece (since 40 is not as curved as 4, Fig.7).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10, and 12, 24, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUCHAN (5,198,636) in view of RUCKL (5,386,097).

SUCHAN teaches the invention above including a curved directing wall, however SUCHAN does not teach contour of the end edges of the side walls is a polyline adapted to the contour of the workpiece surface; contour of the end edges of the side walls is an arc of a circle adapted to the contour of the workpiece surface; distance between the end edges of the side walls and the workpiece surface in the operating position of the hood is less than 50 mm or lies in the range between 0.1 mm and 30 mm

RUCKL teaches:

7. The contour of the end edges (inner edge of 28 and 29) of the side walls (side walls of 28 and 29, shown in Fig.10) is a polyline adapted to the contour of the workpiece surface (Fig.9).

8. The contour of the end edges of the side walls is an arc of a circle adapted to the contour of the workpiece surface (Fig.9).

9. The distance between the end edges of the side walls and the workpiece surface in the operating position of the hood (the gap) is less than 50 mm (is less than a few tenths of a millimeter, col.11 ll.25-29, which meets the requirement of less than 50mm).

10. The width of the gap seals formed between the end edges of the side walls and the workpiece surface (gap) lies in the range between 0.1 mm and 30 mm (is less than a few tenths of a millimeter, col.11 ll.25-29).

12. The side walls of the hood are provided with means by which the contour of the edges of the side walls that lie opposite a workpiece can be changed in order to adapt them to the surface of the workpiece (Fig.9)

24. The curvature of the curved directing wall is exponentially curved (Fig.9).

26. The distance between the end edges of the side walls and the workpiece surface in the operating position of the hood (the gap) is less than 50 mm (is less than a few tenths of a millimeter, col.11 ll.25-29).

27. The distance between the end edges of the side walls and the workpiece surface in the operating position of the hood is less than 50 mm (is less than a few tenths of a millimeter, col.11 ll.25-29).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hood of SUCHAN the contour to the

workpiece as taught by RUCKL in order to have strong negative pressure so the vacuum duct is more efficient.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hood of SUCHAN to have the gap size of RUCKL in order to have strong negative pressure so the vacuum duct is more efficient.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over SUCHAN (5,198,636) in view of RUCKL (5,386,097) in further view of KINNARD (6,439,559).

SUCHAN in view of RUCKL teaches the invention above including end edges of the two side walls have a contour which is adapted to the contour of the surface of a workpiece to be processed, however SUCHAN in view of RUCKL do not teach gap seals.

KINNARD teaches:

2. Corresponding gap seals (82) are formed when the end edges lie opposite the workpiece (23) in the operating position of the hood (Fig.7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hood of SUCHAN in view of RUCKL in view of the gap seals of KINNARD in order to strengthen the vacuum seal between the workpiece and the body (KINNARD, col.4 ll.15-23).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-13 and 23-27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMANTHA A. MILLER whose telephone number is (571)272-9967. The examiner can normally be reached on Monday - Thursday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samantha A Miller/  
Examiner, Art Unit 3749

1/29/2011

/STEVEN B. MCALLISTER/  
Supervisory Patent Examiner, Art Unit 3749